

**A NEW SPECIES OF *ORCYA* FROM THE MARONI  
RIVER BASIN OF FRENCH GUIANA  
(LEPIDOPTERA: LYCAENIDAE)**

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*Abstract.*—First report of pan-Neotropical *Orcya* from the Guyana Shield is *Orcya snyderi*, a distinctive new species described from recently disturbed riparian rain forest margin, upper Maroni River, French Guiana. Sister genus *Noreena* has a regional endemic of similar distribution.

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I recently revised the Neotropical “*Thecla orcynia* Group” (Draudt, 1919) placing twelve pan-Neotropical species in the new genus *Orcya* (Johnson, 1990) and related this genus to a number of sister- and outgroups by numerical cladistic analysis (Johnson, 1989a, 1990). No member of *Orcya* was known from the Guyana Shield region, though a species endemic to this area occurs in a sister genus (*Noreena guianivaga* Johnson) (Johnson, 1989a, b).

Calvin Snyder (volunteer field worker, American Museum of Natural History [AMNH]) recently returned from extensive field work along the Maroni River in French Guiana and his collections included a female of a distinctive new species of *Orcya*. Subsequently, a male and five females from French Guiana were located at the Museum National d’Histoire Naturelle (Paris) (MNHN). This new species is described below, following on the generic diagnosis of *Orcya* (Johnson, 1990). For brevity, the abbreviations DFW, DHW (dorsal fore- and hindwings) and VFW, VHW (ventral fore- and hindwings) are used.

***Orcya snyderi*, new species**

Figs. 1, 2

**DIAGNOSIS.** Male dorsal iridescence limited on FW to baso-medial cells CuA1–CuA2, HW to centro-medial patch; female DFW, DHW non-iridescent dark gray (congeners brightly iridescent in both sexes). Unique pattern elements: (1) DHW black marginal band basad of greatly elongate tails (terminus vein CuA2), (2) VFW, VHW each with (i) prominent black submarginal band, (ii) black medial band (costa to cell M3) basad of, and broadly paralleling, usual white wing band of genus. Male genitalia with diminutive, elliptically shouldered valvae and thin, elongate, vincular structures; female genitalia with anterior and posterior elements of ductus bursae both undulate.

**DESCRIPTION.** *Male.* Upper surface of wings: DFW lacking androconial brand as typical of genus, FW with dark azure blue iridescence confined to baso-medial areas of cells CuA1–CuA2 and to a centro-medial HW patch; tails on known specimen broken (short tail apparent only at terminus vein CuA2, see Female below), anal lobe with bold orange spot. Under surface of wings: ground dark gray, FW with faint

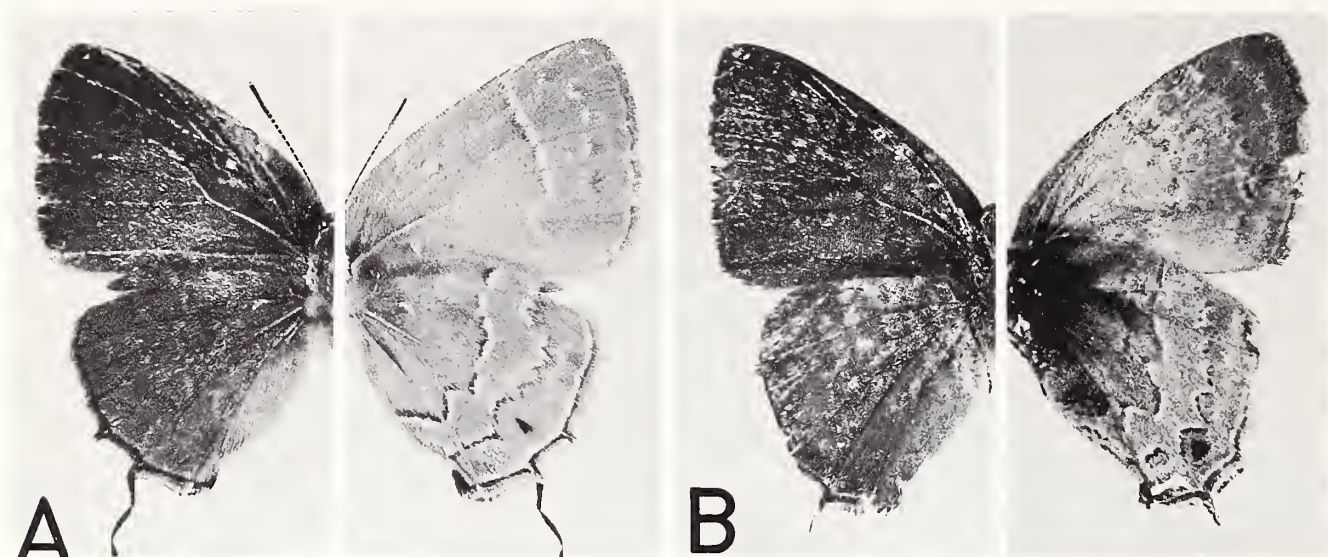


Fig. 1. Adults of *Orcya snyderi*, new species. A. holotype female (upper surface, left; under surface, right). B. allotype male (same view).

black postmedial and submarginal bands (known specimen worn); HW with basal area charcoal gray with slight white slash in discal cell, medial area with meandering white band, broadly bordered basally with black, angled in wide “W”-shape before the anal margin; submarginal area with jagged white band bordered distally with black extending from costa to anal margin and surrounding submarginal orange spots in cell CuA1 and at base of anal lobe. Length of forewing: 11.5 mm (allotype).

*Female*. Upper surface of wings: ground dull gray, FW margins and apices black, HW with black marginal line; HW margin with short black tail, terminus vein CuA1, elongate white-tipped black tail, terminus vein CuA2, anal lobe at anal margin with bold orange spot. Under surface of wings: ground gray, FW with (i) white postmedial line, bordered basally by black, extending in straight line from costa to cell M3 then basally angled to inner margin; (ii) white submarginal line, bordered basally with black, extending in an arc from costa to cell M3 (see Remarks); HW with (i) medial band distally white, basally black, arched widely from costa to cell M3, thereafter jagged in wide “W”-shape before anal margin; (ii) finely jagged, basally white-suffused, black submarginal band extending from costa to anal margin and surrounding submarginal orange orbicular markings in cell CuA1 and at base of anal lobe. No white discal slash that typifies other species of genus. Length of forewing: 11.5 mm (holotype); 11.5–12.5(×11.9) (five paratypes).

*Male genitalia*. Figure 2B. Generally typical of genus (Johnson, 1990: figs. 6, 8) but with ventral vincular parts elongate, slim; valval ventrum parabolic in bilobed area (2B,a,1), terminating in relatively short tapered caudal extensions (2B,a,2). Aedeagus elongate, exceeding rest of genitalia length by about two-fifths; caecum comprising about one-fourth aedeagal length.

*Female genitalia*. Figure 2A. Generally typical of genus (Johnson, 1990: figs. 7, 9) but distinctive as follows: anterior and posterior elements of ductus bursae undulate, length of former about one-half that of latter, posterior element with produced ventral lip; cervix bursae with hood more prominent than in congeners; corpus bursae with paired signa more robust and terminally pronged than in any congener.

TYPES. Holotype female (Fig. 1A), FRENCH GUIANA, Maripasoula; environs



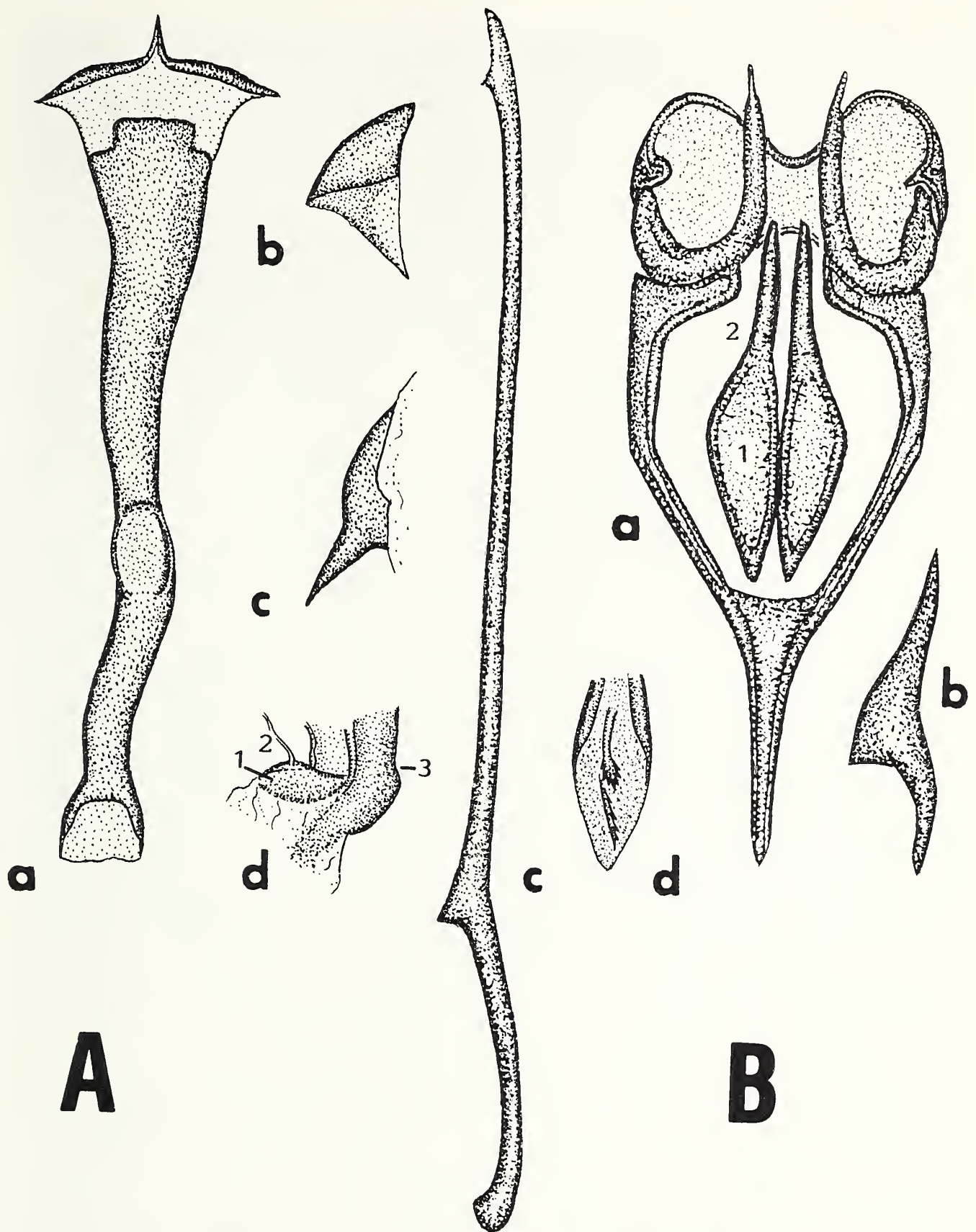


Fig. 2. Genitalia of *Orcya snyderi*, new species. A. holotype female: a, ductus bursae, ventral view; b, lamellal keel, lateral view; c, corpus bursae signum, lateral view; d, cervix bursae [1] with adjoining ductus seminalis [2] and anterior terminus of ductus bursae [3], all in lateral view. B. allotype male: a, genitalia with aedeagus removed (valval bilobed area [1], caudal extension [2]), ventral view; b, valvae, lateral view; c, aedeagus, lateral view; d, aedeagus terminus, ventral view.

of Maripasoula, 125 m, 31 March 1991, leg. C. Snyder, deposited AMNH. Allotype male (Fig. 1B) labelled "Guyane Francaise, Rives [= "banks of"] de Maroni, E. Le Moul't 1909," deposited MNHN. Paratypes. MNHN: five females labelled "Guyane Francaise, Rives de Maroni, E. Le Moul't 1909" (2) and "Guyane Francaise, Maroni, E. Le Moul't 1909" (3).

**DISTRIBUTION.** Currently known from the Maroni River basin in French Guiana/Surinam (see Remarks).

**REMARKS.** *Habitat.* Only the holotype has precise field data. Snyder (pers. comm.) reports that the specimen was collected in the morning in moist secondary riverbank forest and scrub, in an area of high annual rainfall (up to 3,000 mm) broken by a 2½ month dry season. Time of collection coincided with the so-called "March summer" of the region, a period of scant rainfall at the midpoint of the November to July rainy season. Before disturbance the habitat supported lowland rain forest typical of the Guyana Shield on both sides of the river (the east bank now being in Surinam).

*Orcya snyderi* and historical names in "Thecla." Because wing markings of the *O. snyderi* female might be construed as resembling the short original description ("OD") of *Thecla imma* Prittwitz (1865), explanation is needed concerning why I do not associate this name with *Orcya*. *Thecla imma* was described from a single female, now lost, from Corcovado, Rio de Janeiro, Brazil (Bridges, 1988) and the name has been variously applied by curators and catalogers. Draudt (1919) placed *T. imma* in his *Thecla* "strephon-Group," a diverse assemblage of species showing a wide "W"-shaped bend in the VHW band and reduced DFW structural color (Draudt, 1919, pl. 151d–g). Draudt (1919:781) also noted similarities between the OD of *T. imma* and members of his "orcynia-Group," some of which I included in *Orcya* (Johnson, 1990). Early lycaenid specialists W. P. Comstock and E. I. Huntington, curating at the AMNH, attached the name *T. imma* to a variety of Central and South American specimens (some of the latter noted as "new species nr. *imma*"). I included morphological data from these specimens in data matrices for numerical cladistic analysis (Johnson, 1989a, 1990). The final rooted tree (Johnson, 1989a, fig. 8; 1990, fig. 1) included some South American specimens as "undescribed Outgroup X" (Johnson, 1989a, = "Group 3" Johnson, 1990). The other specimens, including the Central American ones, were rejected from the *Orcya* ingroup and placed with specimens of *Thecla orios* Godman & Salvin (1879–1901 [1887]) based on characters of its holotype, a Guatemalan male (Johnson, 1990 "Group 1," an outgroup at the base of the cladogram). I thus consider "*Thecla imma*" objectively ambiguous, its OD being applicable to any number of specimens of divergent morphology. It is particularly noteworthy that an arbitrary application of *Thecla imma*, based on its OD and a regional view of its type locality, would likely include specimens of either "Outgroup X" or *Contrafacia* Johnson (1989a). As can be seen from figure 7A–C in Johnson (1989a), the morphology of these latter groups differs greatly from that of *O. snyderi* and its congeners discussed below. I have proposed elsewhere (Johnson, 1991a) that certain widely used historical names, ambiguous in a revisionary context, may eventually require formal suppression under the ICZN Code.

*Intragenetic relations.* Distinctive characters in both the male and female of *O. snyderi* are intriguing. Unique wing characters include: (1) reduced and absent DFW, DHW surface structural color in males and females, respectively; (2) bold under surface submarginal bands on the fore- and hindwing; (3) small size (congeners



generally 13.5–17.0 mm [15.0–17.0 mm in the common and widespread taxa, 12.0–14.0 mm in the few austral species]). Because of these characters, *O. snyderi* is not readily associated with the genus from a superficial view.

Features appearing somewhat like other congeners require careful consideration. The distinctive VHW pattern, for instance, cannot be considered informative. Austral species *O. larseni* (Lathy) and *O. obliqua* Johnson also have VHW medial bands departing from the thin, extremely jagged pattern typifying most of the genus but neither species' band resembles the robust band of *O. snyderi*. Similarly, southeastern Brazil xerophile *O. catharina* (Draudt) shows reduction of the VHW discal slash but it is never completely absent in fresh specimens as is the case in *O. snyderi*.

Truly compelling similarities involve other wing characters and some structural features emphasized by Johnson (1990) in the generic analysis. Most prominent are several wing and genitalic characters shared by *O. snyderi*, *O. hewitsoni* Johnson (humid montane forest, northern Ecuador south to central Peru) and *O. anthracea* (Hewitson) (humid montane forest, southeastern Brazil). These three taxa show bold hindwing medial bands marked near the anal margin with an emphatic "W"-shaped element and bright orange orbs. In the female genitalia the ductus bursae is undulate and the respective anterior and posterior elements of similar size. Typifying the tendency toward autapomorphy in male genitalia of *Orcya* (Johnson, 1990, figs. 6, 8), details in *O. snyderi* (ventral valval and vincular shape, elongate aedeagus) do not argue for or against any particular intrageneric relation.

*Biogeography.* Affinity of *O. snyderi* to *O. hewitsoni* and *O. anthracea* mirrors biogeographic relations in several other groups of butterflies where the Amazon basin segregates sister species into respective Guyana Shield, western Andean, and south-east Brazilian distributions. This pattern occurs in sister genus *Noreena* (Johnson, 1989a) and numerous other Theclinae (Johnson, 1991a, b). Regarding an Andean/Maroni River basin sister species relationship, perhaps the most oft-cited example is *Heraclides maroni* (Moreau) and *H. rhodostictus* (Butler and Druce) (Papilionidae), where the superficial resemblance is so striking that first reported specimens of the former were thought to be mislabelled examples of the latter (D'Abrera, 1981; Johnson and Rozycki, 1986; Johnson and Matusik, 1989).

*Etymology.* Patronym for Calvin Snyder who collected the holotype.

#### ACKNOWLEDGMENTS

I thank Calvin Snyder for bringing the holotype to my attention and Dr. Jacques Pierre (MNHN) for locating specimens at the MNHN.

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Received 5 September 1991; accepted 25 February 1992.